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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,983	03/19/2004	Mikhail Sergeevich Shchepinov	GJE-53XD1	8927

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SALIWANCHIK LLOYD & SALIWANCHIK
A PROFESSIONAL ASSOCIATION
PO BOX 142950
GAINESVILLE, FL 32614-2950

EXAMINER

GAKH, YELENA G

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/804,983

Applicant(s)

SHCHEPINOV ET AL.

Examiner

Yelena G. Gakh, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20 and 22-25 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05/23/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. RCE and supplemental IDS filed on 05/23/06 are acknowledged. No amendment was made to the claims.
2. The examiner maintains the rejection over the prior art.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 20 and 22-25** are rejected under 35 U.S.C. 103(a) as obvious over Shchepinov Shchepinov et al. (Innovation and Perspectives in Solid Phase Synthesis, Int. Symposium, 1999) or Berlin et al. (Org. Mass Spectr.).

Shchepinov et al. disclose the following: "a new method of encoding has been developed based on the high desorption rate of triphenylmethyl-based tags under the conditions of LDI-TOF-MS, which is simpler than chromatog.-based methods. The trityl cations can be detected by LDI-TOF analysis with or without matrix. Combinatorial libraries of oligonucleotides on TentaGel were synthesized by a split- and mix-strategy using 5'-DMT or 5'-Fmoc nucleoside phosphoramidites. Trityls with different masses were utilized to tag the bases coupled at each

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step in the synthesis, by coupling different amines to activated carboxyl groups on the trityl moiety. Hybridization from the library selected the beads with specific oligonucleotide. The tags, which desorb and fly extremely well in the pos. mode of a LDI process, may be cleaved by either an acid or directly by laser during (MA) LDI-TOF. These tags are capable for encoding in strategies not involving strong acids, such as oligonucleotide and peptide synthesis and small mol. combinatorial libraries” (Abstract). Since combinatorial libraries with trityl-tagged compounds are disclosed, they comprise large number of compounds, with at least 20 compounds available.

Berlin discloses mass spectrometry of five classes of trityl compounds, including 25 trityl derivatives, which meet the recitations of the claims.

Although Shchepinov or Berlin do not specifically teach separately packaged mixtures of compounds, it would have been obvious for any person of ordinary skill in the art to have trityl compounds disclosed by Shchepinov or Berlin packaged for transporting for further analysis (e.g. to mass spectrometry laboratory) or combinatorial synthesis, with the number of packages optimized for transportation, e.g. three, five, etc. and with packages comprising different derivatives, i.e. with molecular masses, which do not overlap.

Allowable Subject Matter

6. **Claim 21** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The claim recites the limitation defining more specific relations between trityl derivatives in the first and second packages, which are more particular for the intended use of the compounds and which therefore make such packages non-obvious over the prior art.

Response to Arguments

7. Applicant's arguments filed 05/23/05 have been fully considered but they are not persuasive. The Applicants seem to repeat their arguments directed toward intended use of the claimed compounds in the packages. Neither Shchepinov, nor Berlin should teach or suggest

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using trityl compounds as calibration material in a mass spectrometry procedure, since this is not what is being claimed in the instant application. The Applicants' conclusion that the examiner used "impermissible hindsight analysis of the prior art" completely contradicts Applicants' own statement that the examiner did not provide a basis for the claimed invention the way it was disclosed in the specification, i.e. for use in mass spectrometric analysis. It would have been impossible for the examiner to apply the prior art using a different motivation from the one disclosed in the instant application and at the same time to have "impermissible hindsight analysis of the prior art". Again, packing known trityl derivatives and their mixtures in several sets of packages is a trivial and obvious procedure for transporting the compounds for further high-throughput analysis or combinatorial synthesis. Claim 20 recites only two sets of trityl derivatives mixtures with different masses. There is nothing specific in the claim that prevents any organic chemist to pack non-separated mixtures of trityl derivatives with different molecular weights for further analysis or for combinatorial synthesis. The only specific recitation is provided by claim 21, which was indicated as allowable over the prior art. Contrary to the Applicants' arguments, there are no defined mixtures in claim 20. Mixtures of compounds with different molecular weights are the only possible mixtures. At least two sets of mixtures with non-overlapped molecular weights would be obvious mixtures packed for transportation for further use in combinatorial synthesis. The mixtures can be formed during synthesis, and not further separated.

Conclusion

This is an RCE of the Applicant's application. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yelena G. Gakh, Ph.D. whose telephone number is (571) 272-1257. The examiner can normally be reached on 9:30 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7/3/06



**YELENA GAKH
PRIMARY EXAMINER**